

**ABSTRACT**

A communications receiver may include an adaptive filter unit for removing coherent  
5 interference components from a received signal. In the absence of a signal of interest, the  
filter may adapt dynamically to remove current interference components. When a signal  
of interest is detected, the filter may be controlled to stop (or at least reduce) its  
adaptation, to prevent removal of the signal of interest. The received signal may be  
down-converted to a complex baseband by conditioning circuitry. A detector may detect  
10 the signal of interest, and control the filter. Autocorrelation may be used to estimate a  
characteristic of the signal of interest in the complex baseband. The detector may include  
hysteresis to react quickly to the start of signal of interest, and more slowly to an end of  
the signal of interest. The signal of interest may be a frequency shift keyed (FSK) signal.  
A demodulator may demodulate FSK components based on the autocorrelation result.  
15 The characteristic of the signal of interest used for detection and/or demodulation may be  
a directional characteristic of a vector representing the complex baseband signal in  
complex space.